

CLAIMS

We Claim:

1. A suspension for use in a magnetic storage disk drive,
comprising:

5 a hinge member; and,

a load beam having an associated head gimbal pivot
point and a torsional axis, wherein said hinge and
said load beam are formed separately and
subsequently joined together, said torsional axis
10 approximately passing through said pivot point.

2. A suspension load beam as in claim 1 wherein said load
beam comprises one or more ribs formed along a portion of
said load beam, said ribs are formed such that the
15 distribution of mass of said load beam result in the balance
of said total mass about said torsional axis.

3. A suspension load beam as in claim 1 wherein said load
beam is formed from magnesium.

4. A suspension load beam as in claim 1 wherein said load
20 beam is formed from a magnesium rich alloy.

5. A suspension as in claim 1 wherein said load beam is formed from a constrained layer damping material.

6. A suspension as in claim 5 wherein said constrained layer damping material comprises a sandwich of two metal layers and a viscoelastic damping material disposed between the two metal layers.

7. A disk drive, comprising:

at least one magnetic disk having a recording surface;
a motor connected with said disk;
a slider with a trailing surface;
a magnetic recording head for recording digital data on said recording surface of said disk, said magnetic recording head formed on said trailing surface of said slider;
a suspension connected with said slider, said suspension comprising a hinge portion, a load beam portion having a first and second outside edge, said hinge portion and load beam portion being formed separately and joined together, said load beam having a distribution of total mass balanced about a torsional axis, said torsional axis approximately passing through said pivot point;

a rigid arm connected with said suspension; and
an actuator connected with said rigid arm.

5 8. A disk drive as in claim 7 wherein said load beam has
one or more ribs formed along a portion of said load beam,
said ribs are formed such that the distribution of mass of
said ribs when combined with the distribution of mass of
other portions of said load beam result in the balance of
said total mass about said torsional axis.

10 9. A disk drive as in claim 7 wherein said load beam is
formed from magnesium.

10. A disk drive as in claim 7 wherein said load beam is
formed from a magnesium rich alloy.

15 11. A disk drive as in claim 7 wherein said load beam is
formed from a constrained layer damping material.

12. A suspension as in claim 11 wherein said constrained
layer damping material comprises a sandwich of two metal
layers and a viscoelastic damping material disposed between
the two metal layers.